

REMARKS

The Markush language has been corrected as suggested by the Examiner and any issue relating to average molecular weight has been rendered moot by cancellation of claims 4-6. Accordingly, withdrawal of the Section 112 rejection is respectfully solicited.

The rejection of claims 1-6 and 12-16 under 35 U.S.C. 103 over Hartman in view of Vickers and Paulson is respectfully traversed.

The rejected claims relate to a compound which is used as a dispersant in printing inks in which it can reduce viscosity and increase gloss. The compound is admittedly novel. It is also unobvious and has surprising and unexpected properties.

The Hartman patent relates to an alkyl- or aryl-terminated polyamide which can be used as a thixotropic rheological additive to provide shear thinning and viscosity recovery. The polyamide is the reaction product of any aliphatic or aromatic carboxylic acid having more than one carboxyl groups with a monoamine, with both a monoamine and a polyamine of formula II, with a polyamine of formula III and a monocarboxylic acid, or is the reaction product of any aliphatic or aromatic, primary or secondary amine having a functionality about 2 with a monocarboxylic acid. Virtually any carboxylic acid type compound and virtually any amine is within the immense scope of this disclosure. Since the reaction product is not limited to use of one acid and one amine, many millions, if not billions, of compounds are within that scope. As the Examiner has recognized none of the disclosed species in Hartman are within the scope of the rejected claims. Thus, this is a shotgun disclosure vis-à-vis the instant claims.

The Examiner has pointed out that trimellitic acid is disclosed. However, there are some 50 other carboxylic acids also disclosed, and any of the disclosed acids (and others) may be used alone or in combination. What, it must be asked, would

cause the skilled person to select this acid in preference to any other? Why not select an aliphatic acid, or the sebacic acid of the working example for that matter? The answer is that there is no reason to make this selection.

Similarly, what would cause the skilled person to select any of the numerous amines disclosed in preference to any other? Why not select an aliphatic monoamine such as the octadecylamine used in the working example? The answer again is that there is no reason to make this selection.

To make the appropriate selections from Hartman's shotgun disclosure requires one to use the instant claims as a the template, and then find materials in the disclosure to fit the template. That, of course, is improper. There is no teaching or suggestion which would lead one skilled in the art to select the proper one of the four reaction schemes disclosed in Hartman and then select the proper reactants in order to realize the present invention. While the choice of reaction schemes may be 1 of 4, it does not follow that the choice of reactants is not a "large list", as implied on page 5 of the Action. Even within any one reaction scheme, the number of permutations and combinations possible is enormous. To then effectively say, as the Office Action does, that it would be obvious to chose "any" acid and "any" amine disclosed is an after-the-fact rationalization needed to meet the instant claims and made without any stated reason. That also is improper under Section 103.

Beyond the foregoing, the Hartman compounds are rheological additives that function as a slag-slump control agents providing thixotropic properties to the compositions in which they are used. There is nothing in this reference which teaches or suggests that any compound within its vast scope can be used as a dispersing agent for printing inks or to provide reduced viscosity and increased gloss. That means the fact that the claimed compound has such properties is surprising and unexpected.

Nothing in Harman, or any of the other references, that such properties were even possible.

This hindsight nature of the combination is further apparent from the acknowledgement on page 7 of the Action that there is no teaching or suggestion in these references that the compound of the claims can be a polymeric dispersant, etc. The Office Action follows this acknowledgment by again alleging that the compounds would "intrinsically" have various characteristics or function. That assertion would be relevant if the compound was old since, as the Examiner has correctly pointed out, a compound and its properties are not separable. The assertion fails here because an essential predicate is the assumption that the compound is old and it is not (as established by an absence of a § 102 rejection). Therefore, the Action is essentially arguing that if you happen to make the compound, it will have these properties intrinsically. But there is no reason or motivation to make the compound in the first place nor is there any expectation, reasonable or otherwise, that the properties may be realized. If there is no expectation, why would the skilled person make the compound? These new compounds have the properties of a dispersant which decrease viscosity and increases gloss, and that is undeniably surprising and unexpected.

The secondary references do not cure any of the deficiencies of Hartman. The Vickers reference has been cited solely to show that the same compound is referenced under two different trade names, namely XTJ-508 and M-2070. This disclosure is found in the middle of a reference which deals with additives for cementitious compositions.

Paulson teaches a polyether amide which can be used to improve adhesion characteristics in protective and decorative coatings and which is the reaction product of a polyalkylene diamine and a polycarboxylic acid. There is no motivation for a person skilled in the art to consult Paulson and combine any aspect of it with Hartman. The

assertion that the two references are "in the same field of endeavor" uses an inappropriate frame of reference. They would properly be in the same field for the purpose of combination if the skilled person either seeking to improve Hartman or to solve a problem in Hartman would logically consult Paulson. But Hartman's material is a slag/slump control agent which provides superior shear-thinning and viscosity control and there is nothing in Paulson which has relevance to making or using slag/slump control agents (regardless of whether or not they provides shear-thinning and viscosity control); Paulson concerns adhesion control, a property about which Hartman is silent. Further, there is no apparent problem in Hartman which requires a solution. Motivation to combine the two references is clearly missing. Additionally, the fact that two such diverse references have been combined further attests to the fact that this is a hindsight combination.

While it is true that there is a reference in Paulson to M-2070 in column 7, it is important to recognize that this disclosure is limited to being an indication that this is a type of polyoxyalkylene monoamine or ether-based monoamine which can be used to terminate the formation of a polyetheramide being made by reacting a diamine and a polycarboxylic acid. This expressly limited use cannot be ignored when considering whether there is motivation to use it or when considering the pertinence of observing on page 6 of the Action that only 4 monoamines are named in this paragraph (actually 6 are named). Neither Hartman nor the present invention seeks to use a monoamine to terminate a polyetheramide being made by reacting a diamine and a polycarboxylic acid. There is, therefore, no reason to extract the teachings of Paulson for incorporation into Hartman.

In response to the assertion also made on page 6 that it would be obvious to produce a lower molecular weight product that has reduced melt temperature and increased water-solubility", apparently referring to column 7, lines 13-15 of Paulson, two observations are appropriate. First, Paulson qualifies the statement with "often have"

which means these attributes are not certain, and renders this an invitation to experiment. Secondly, and even more importantly, nothing in the record teaches or suggests that it is desirable or advantageous produce a lower molecular weight product that has reduced melt temperature and increased water-solubility than disclosed in Hartman. This fact still further show the combination is an improper hindsight reconstruction without any motivation to do so.

In summary, the references on which this rejection is based may have disclosures from which bits and pieces, if appropriately extracted from the individual references combined in a particular way, might possibly result in the formation of a compound of the rejected claims. There is, however, no teaching or suggestion or motivation which would lead one skilled in the art to do so. One skilled in the art would not make the combination proposed given that each of the references is in a different technology, namely a slag/slump control agent, a cement additive and an adhesion improver. There can be no question that this rejection is based on an attempted hindsight reconstruction of the invention. There is no apparent reason for the selection of these references other than that they are the result of a computer search designed using the application text as a template. This is clearly improper for obviousness purposes.

Claims 7-11 have been rejected under 35 U.S.C. 103 over Mahmud in view of Hartman, Vickers, Paulson and Walker. This rejection is respectfully traversed.

It is believed the inclusion of Walker in the statement of this rejection are a typographical error in light of paragraphs 8 and 9, but if not, the arguments presented in the last response are hereby repeated by reference.

The Mahmud reference has been cited solely to teach that inks may contain a rheological additive. Hartman teaches a rheological additive but not one corresponding

to the instant compound. The appropriateness of modifying Hartman based on Vickers and Paulson has been discussed above. That discussion is equally applicable here and in fact, is reinforced by the fact that not a single one of those references relate to inks. The only secondary reference which makes some reference to a rheological agent is Hartman but that reference teaches the agent disclosed is a slag-slump control agent for sealants, etc. Here also, the combination applied in this rejection is clearly based on hindsight using the present application as a template.

In light of the foregoing considerations, it is respectfully submitted that this application is in condition to be allowed and the early issuance of a Notice of Allowance is respectfully solicited.

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Respectfully submitted,

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